Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-30. (canceled)

31. (currently amended) A method of converting heat energy from a fluid into mechanical energy, comprising the steps of:

evaporating a working fluid by heat exchange in an evaporator, the working fluid comprising a mixture of at least two components;

expanding the evaporated working fluid in a low-pressure expansion device;

partially converting energy of the working fluid set free in said step of expanding to mechanical energy; ~~and~~

withdrawing energy from at least a first component of the working fluid and raising a temperature of at least a second component of the working fluid downstream of the low-pressure expansion device, the energy held in the at least a second component of the working fluid after said step of raising the temperature being recyclable into the evaporator and usable for evaporating additional working fluid<u>; and</u>

<u>absorbing, by an absorption fluid, the first component of the working fluid by an absorption device arranged downstream of the low-pressure expansion device</u>.

32. (previously presented) The method of claim 31, wherein said step of withdrawing energy from at least a first component comprises setting energy free in at least one of an absorption and an adsorption process, and at least part of the energy required for said step

of raising the temperature of the at least a second component after low-pressure expansion is gained from the energy set free in the one of the absorption and adsorption process.

33. (previously presented) The method of claim 31, wherein the first component is absorbed one of in and downstream of the low-pressure expansion device by an absorption fluid, and wherein heat is transferred to the second component that remains evaporated, the transferred heat being recyclable.

34. (previously presented) The method of claim 31, wherein the mixture is azeotropic at a certain mixing ratio and has a minimum boiling point.

35. (previously presented) The method of claim 31, wherein the working fluid is present as an azeotropic mixture or as a mixture with a lowered boiling point with respect to the boiling point of the component of the mixture having the highest boiling point, wherein a difference between the lowered boiling point and the highest boiling point is at least 5° C.

36. (previously presented) The method of claim 32, wherein said step setting energy free in at least one of an absorption and an adsorption process comprises controlling absorption of the first component such that the second component that remains evaporated is heated to a temperature above the boiling point of the mixture, said method further comprising the step of condensing the second component in the heat exchanger in which the evaporation of the working fluid occurs.

37. (previously presented) The method of claim 31, wherein the working fluid is a solvent mixture with a low molar evaporation enthalpy and has at least one of organic and inorganic solvent components, wherein one of the components of the working fluid is a protic solvent.

38. (previously presented) The method of claim 33, wherein the absorption fluid is a reversibly immobilizable solvent, and wherein the absorption fluid in its non-immobilized aggregate state is the first component of the working fluid.

39. (previously presented) The method of claim 31, wherein the working fluid is a mixture of water and silicone.

40. (previously presented) The method of claim 31, wherein the working fluid is a silicate solution.

41. (previously presented) The method of claim 31, wherein the low-pressure expansion device is a roots blower.

42. (previously presented) The method of claim 41, wherein the roots blower is configured with at least one injection opening, said method comprising the step of introducing an absorption fluid or a protic solvent into the roots blower through the at least one injection opening.

43. (canceled)

44. (currently amended) The method of claim ~~43~~ 31, further comprising the step of separating the absorbed first component from the absorption fluid in a separating device.

45. (previously presented) The method of claim 44, wherein the separating device is configured as a membrane system.

46. (previously presented) The method of claim 44, wherein the separating device is a generator unit in which the absorbed first component is desorbed by heating.

47. (previously presented) The method of claim 44, further comprising the steps of feeding the absorption fluid to the separating device and subsequently back to the absorption device using a pump.

48. (previously presented) The method of claim 31, wherein the step of raising a temperature of at least a second component is performed using a heat pump driven by a mechanical evaporator or by a liquid sealed compressor system.

49. (previously presented) The method according to claim 48, wherein the heat pump is formed as an absorption heat pump with an azeotropic mixture, the temperature increase being effected by absorbing one component and transferring the absorption energy to the second component remaining evaporated.

50. (previously presented) The method of claim 31, wherein the working fluid has at least one component and is a gas or fluid.

51. (previously presented) The method of claim 50, wherein the working fluid is a gas or liquid flow from industrial cooling, heat exchange, transformation or expansion processes.

52. (previously presented) The method of claim 50, wherein the working fluid is atmospheric ambient air with water vapor contained in it as air moisture.

53. (previously presented) The method of claim 31, the heat energy is one of noticeable and latent heat of individual or plural components.

54.-57. (canceled)

58. (previously presented) The method of claim 31, wherein said step of evaporating comprises transforming heat energy to a higher temperature using at least one heat pump to evaporate the working fluid in the evaporator.

59. (previously presented) The method of claim 31, further comprising the step of processing condensate water produced by the at least one heat pump to produce one of industrial water and drinking water.

60. (currently amended) The method of claim ~~43~~ 31, wherein the absorption device is configured as a scrubber.

61. (new) A method of converting heat energy from a fluid into mechanical energy, comprising the steps of:

evaporating a working fluid by heat exchange in an evaporator, the working fluid comprising a mixture of at least two components;

expanding the evaporated working fluid in a low-pressure expansion device;

partially converting energy of the working fluid set free in said step of expanding to mechanical energy; and

withdrawing energy from at least a first component of the working fluid and raising a temperature of at least a second component of the working fluid downstream of the low-pressure expansion device, the energy held in the at least a second component of the working fluid after said step of raising the temperature being recyclable into the evaporator and usable for evaporating additional working fluid,

wherein the first component is absorbed one of in and downstream of the low-pressure expansion device by an absorption fluid, and wherein heat is transferred to the second component that remains evaporated, the transferred heat being recyclable.

62. (new) A method of converting heat energy from a fluid into mechanical energy, comprising the steps of:

evaporating a working fluid by heat exchange in an evaporator, the working fluid comprising a mixture of at least two components;

expanding the evaporated working fluid in a low-pressure expansion device;

partially converting energy of the working fluid set free in said step of expanding to mechanical energy; and

withdrawing energy from at least a first component of the working fluid and raising a temperature of at least a second component of the working fluid downstream of the low-pressure expansion device, the energy held in the at least a second component of the working fluid after said step of raising the temperature being recyclable into the evaporator and usable for evaporating additional working fluid,

wherein said step of withdrawing energy from at least a first component comprises setting energy free in at least one of an absorption and an adsorption process, and at least part of the energy required for said step of raising the temperature of the at least a second component after low-pressure expansion is gained from the energy set free in the one of the absorption and adsorption process, and

wherein said step setting energy free in at least one of an absorption and an adsorption process comprises controlling absorption of the first component such that the second component that remains evaporated is heated to a temperature above the boiling point of the mixture, said method further comprising the step of condensing the second component in the heat exchanger in which the evaporation of the working fluid occurs.

63. (new) A method of converting heat energy from a fluid into mechanical energy, comprising the steps of:

evaporating a working fluid by heat exchange in an evaporator, the working fluid comprising a mixture of at least two components;

expanding the evaporated working fluid in a low-pressure expansion device;

partially converting energy of the working fluid set free in said step of expanding to mechanical energy; and

withdrawing energy from at least a first component of the working fluid and raising a temperature of at least a second component of the working fluid downstream of the low-pressure expansion device, the energy held in the at least a second component of the working fluid after said step of raising the temperature being recyclable into the evaporator and usable for evaporating additional working fluid,

wherein the step of raising a temperature of at least a second component is performed using a heat pump driven by a mechanical evaporator or by a liquid sealed compressor system, and

wherein the heat pump is formed as an absorption heat pump with an azeotropic mixture, the temperature increase being effected by absorbing one component and transferring the absorption energy to the second component remaining evaporated.